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09/663,659	09/15/2000	Malcolm G. Smith SR.	5573 413436/070	2182

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EXAMINER

NOWLIN, APRIL A

ART UNIT

PAPER NUMBER

2876

DATE MAILED: 12/04/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/663,659

Applicant(s)

SMITH ET AL

Examiner

April A. Nowlin

Art Unit

2876

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-65 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 32 is/are allowed.
- 6) ☒ Claim(s) 1-31, 33-62, 64 and 65 is/are rejected.
- 7) ☒ Claim(s) 63 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 September 2000 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____ 6) ☐ Other: ____

DETAILED ACTION

Information Disclosure Statement

1. The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609 A(1) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered.

Drawings

2. Figure 12 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

3. The abstract of the disclosure is objected to because it contains legal phraseology such as "comprises" (see line 4) and "comprise" (see line 8). Correction is required. See MPEP § 608.01(b).

4. The disclosure is objected to because of the following informalities:

On page 19, line 3: Substitute "form" with -- from --.

On page 19, line 8: Substitute "beings to" with -- being --.

On page 41, line 17: Substitute "280" with -- 480 --.

On page 41, line 22: Substitute "282" with -- 482 --.

Appropriate correction is required.

5. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Objections

6. Applicant is advised that should claims 21 and 25 be found allowable, claims 22 and 26 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

7. Claims 17, 28, 29, 31, 33-46, 55-58, 61, and 63-65 are objected to because of the following informalities:

Re claim 17: Delete "the" (see line 1).

Re claim 28: Delete "generally" (see line 2).

Re claim 29: Delete "generally" (see line 2).

Re claim 33: Substitute "edge" with -- edges -- (see line 2).

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Re claim 44: Delete "generally" (see lines 2 and 3).

Re claim 44: Substitute "device" with -- card -- (see line 3).

Re claim 45: Delete "generally" (see line 2).

Re claim 45: Substitute "device" with -- card -- (see line 3).

Re claim 55: Substitute "signalsb" with -- signals -- (see line 6).

Re claim 55: Delete "a data surface region" (see line 4).

Re claim 58: Substitute "protective layer" with -- protective coating -- (see lines 10 and 11).

Re claim 61: Substitute "protective layer" with -- protective coating -- (see lines 12 and 14).

Re claim 63: Substitute "In a" with -- A -- (see line 1).

Re claim 63: Substitute "protection" with -- protective -- (see line 16).

Re claim 64: Substitute "non-magnetid" with -- non-magnetic -- (see line 3) and "substgrate" with -- substrate -- (see line 5).

Claims 31, 34-43, 46, 56, 57, and 65 are dependent upon those claims specifically mentioned above and are therefore objected for the same reasons.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

9. Claims 21-24, 34, 36-43, 46-62, 64, and 65 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 21-24 recites the limitation "said outer layers" in line 1. There is insufficient antecedent basis for this limitation in the claim.

Claims 38 and 39 recites the limitation "said protective coating" in line 4. There is insufficient antecedent basis for this limitation in the claim.

Claims 38 and 39 recites the limitation "the protective coating" in lines 8 and 10, respectively. There is insufficient antecedent basis for this limitation in the claim.

Claim 40 recites the limitation "said protective coating" in line 1. There is insufficient antecedent basis for this limitation in the claim.

Claims 41-43 recites the limitation "said data processing station" in lines 2 and 1. There is insufficient antecedent basis for this limitation in the claim.

Claim 46 recites the limitation "said thin film layer" in line 1. There is insufficient antecedent basis for this limitation in the claim.

Claim 62 recites the limitation "said exchange break" in lines 9 and 10. There is insufficient antecedent basis for this limitation in the claim.

The term "relatively" in claims 34, 47, 55, 59, 62, and 64 is a relative term, which renders the claim indefinite. The term "relatively" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the

invention. The phrase "a relatively hard, abradable protective coating" has been rendered indefinite by the use of the term "relatively".

Re claims 53, 58, 60, and 61: The addition of the phrase "diamond like hardness" to an otherwise definite expression (e.g., protective coating) extends the scope of the expression so as to render it indefinite. Appropriate clarification and correction is required to alleviate the indefiniteness of the language "a diamond like hardness protective coating". See M.P.E.P. § 2173.05(b).

Claims 36, 37, 48-52, 54, 56, 57, and 65 are dependent upon those claims specifically mentioned above and are therefore rejected for the same reasons.

Provisional Obviousness Type Double Patenting

10. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

11. Claims 33, 35, and 41-45 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 2, and 6-10 of copending Application No. 09/663,658 (hereinafter '658). Although the conflicting claims are not identical, they are not patentably distinct from each other

because both the present claimed invention and the '658 application discloses the same subject matter, such as a data storage card comprising:

- a substrate having first and second edges;

- a data surface region located on the substrate between the first and second edges, the data surface region comprising a magnetic storage medium having at least one layer of high density, high coercivity magnetic material for storing magnetic signals;

- wherein the at least one magnetic material layer is a thin film layer of high density, high coercivity magnetic material having a predetermined magnetic field orientation for storing data;

- wherein the substrate is moved relative to a data processing station;

- wherein a data processing station is moved relative to the substrate;

- wherein a data processing station and the substrate are moved relative to each other;

- wherein the substrate is substantially planar and generally rectangular in shape and the data storage device is generally rectangular in shape; and

- wherein the substantially planar and generally rectangular shaped substrate including the data storage device is transported past a data processing station (see pages 4-6 of '658 application).

Thus, in respect to the above discussions, it would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to use the teachings of claims 1, 2, and 6-10 of '658 application as a general teaching for a data storage card to perform the same functions as claimed by the present application. The

instant claims obviously encompass the claimed inventions of '658 application and differ only in terminology.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claim Rejections - 35 USC § 102

12. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

13. Claims 1-31, 33, 35, and 44 are rejected under 35 U.S.C. 102(b) as being anticipated by Yokoyama (US 5,492,745).

Re claims 1-13, 19-24, 27, 28, and 31: Yokoyama teaches a magnetic recording medium comprising a substrate having first and second edges and a data surface region formed therebetween and wherein the substrate includes at least one layer of a non-magnetic material adapted to receive at least one layer of magnetic material forming the data surface region; wherein the substrate includes a material selected from the group of a metal substrate, a glass substrate, a ceramic substrate, and a resin substrate; wherein the substrate comprises outer layers bonded to the at least one layer; wherein the substrate is formed of the at least one layer as a single layer comprising a glass or glass-ceramic material; wherein the outer layers comprise plastic material and the data surface region comprises a magnetic recording media; wherein

the substrate includes outer layers which are generally coplanar with the at least one layer and the data surface region. (see figure 7; col. 1, line 3 to col. 2, line 16; col. 2, line 61 to col. 3, line 67)

Re claims 14, 18, 29 and 44, wherein the substrate is generally rectangular in shape (see figure 7).

Re claims 17 and 30, wherein the data surface region comprises a magnetic stripe region adapted to cooperate with a data reader comprising a magnetic stripe reader for reading information from the magnetic stripe reader.

Re claims 15 and 16, wherein the substrate is formed of a glass or glass-ceramic material formed of a composition having a coefficient of expansion similar to that of an aluminum alloy substrate material.

Re claims 25 and 26, wherein the data surface region comprises nickel-cobalt (see col. 1, lines 47-51 and col. 2, line 29-38).

Re claim 33, Yokoyama further teaches a magnetic recording medium comprising a non-magnetic substrate having first and second edges; a data surface region located on the non-magnetic substrate between the first and second edges, the data surface region comprising a magnetic storage medium having at least one layer of high density, high coercivity magnetic material for storing magnetic signals. (see col.

Re claim 35, wherein the at least one magnetic material layer is a thin film layer of high density, high coercivity magnetic material having a predetermined magnetic field orientation for storing data.

Allowable Subject Matter

14. Claims 32 and 63 are allowable over prior art.
15. Claims 34, 36-40, and 46 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
16. Claims 47-62, 64, and 65 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.
17. The following is a statement of reasons for the indication of allowable subject matter: The prior art of record, taken alone or in combination, fail to teach or fairly suggest a data unit comprising *i)* a data card having a substrate and *ii)* a data card reader comprising a base; a substrate support mounted to the base for controlling movement along a first path; a first and second data head support surfaces positioned at opposite ends of a second path and adjacent to the substrate support, the first and second paths being transverse to one another; and a data head drive mounted to the base, the data head drive comprising a data head reciprocally movable along a second path, the data head comprising a data head surface which contacts the first and second data head support surfaces as the data head moves along the opposite ends of the second path.

Furthermore, the prior art of record, taken alone or in combination, fail to teach a method of processing magnetic signals using a magnetic recording medium having a high density magnetically coercive material for storing magnetic signals with the

coercive material axes of magnetization oriented in a predetermined direction comprising the steps of: i) providing a non-magnetic substrate for supporting a high density magnetically coercive material; ii) providing a layer of non-magnetic material disposed on the high density magnetically coercive material for defining a exchange break layer; iii) providing a protective coating including a magnetically permeable, magnetically saturable material which is disposed on the exchange break layer and responsive through the exchange break layer to the coercive material axes of magnetization to produce a magnetic image field in a direction opposite to the predetermine direction, the protective coating being formed of a material which resists at least one of chemical, magnetic, and mechanical degradation of the magnetic recording medium; iv) generating with a magnetic control device having a bias field adapted to increase through the protective coating and the exchange break layer the reluctance of the magnetic saturable, magnetically permeable material to enable the magnetic signal to pass between the high density magnetically coercive material through the exchange break layer and the protective coating to a magnetic transducer.

Conclusion

18. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US Pat. No. 5,928,759 to Arita et al.	US Pat. No. 5,236,791 to Yahisa et al.
US Pat. No. 5,626,970 to Hedgcoth	US Pat. No. 5,720,500 to Okazaki et al.
US Pat. No. 5,939,202 to Ataka et al.	US Pat. No. 6,186,398 to Kato et al.

US Pat. No. 6,238,809 to Wu et al. US Pat. No. 6,080,476 to Kanbe et al.

US Pat. No. 6,221,508 to Kanbe et al.

19. Any inquiry concerning this communication or earlier communications from the examiner should be directed to April A. Nowlin whose telephone number is (703) 605-1219. The examiner can normally be reached on Monday - Friday from 7:30AM - 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael G. Lee can be reached on (703) 305-3503. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 308-7382 for After Final communications.

Communications via Internet e-mail regarding this application, other than those under 35 U.S.C. 132 or which otherwise require a signature, may be used by the applicant and should be addressed to [april.nowlin@uspto.gov].

All Internet e-mail communications will be made of record in the application file. PTO employees do not engage in Internet communications where there exists a possibility that sensitive information could be identified or exchanged unless the record includes a properly signed express waiver of the confidentiality requirements of 35 U.S.C. 122. This is more clearly set forth in the Interim Internet Usage Policy published in the official Gazette of the Patent and Trademark on February 25, 1997 at 1195 OG 89.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.



AAN
December 2, 2002



THIEN M. LE
PRIMARY EXAMINER